## Remarks

Entry of the amendments, reconsideration of the application, as amended, and allowance of all pending claims are respectfully requested. Upon entry of the amendments, claims 1-10 are pending.

With the above amendments, applicants have amended claims 1, 8 and 9 to remove the word "relevant" and to make further clarifications. Further, in claim 1, applicants added "computer implemented" to the preamble and "to provide backed-up files" to the last element of the claim. Claim 3 has been amended to remove the word "its", and claim 8 has been amended to remove "computer usable medium". Further, dependent claim 10 has been added to explicitly claim a feature of applicants' invention. Support for this amendment may be found on page 2, paragraph 5; and pages 13-15, paragraphs 49-56. No new matter has been added by any of the amendments.

In the Office Action dated January 11, 2006, claims 1-9 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter; claims 1-7 are rejected under 35 U.S.C. 112, second paragraph; and claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Rao et al. (U.S. Patent No. 5,689,706). Each of these rejections is addressed below.

### § 101 Rejection

Claims 1-9 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Specifically, it is stated in the Office Action that the claims are not directed towards a final result that is "useful, tangible and concrete." Applicants respectfully disagree. Applicants' invention is directed to backing up files (i.e., data). The backing up of data is extremely useful and is a tangible and concrete result. Notwithstanding, in a bona fide attempt to overcome this rejection and without acquiescing to the rejection, applicants have amended the preamble of claim 1 to indicate that the process is a computer implemented process, and have explicitly recited that backed-up files are provided. Backed-up files are tangible and concrete, as well as useful. Therefore, applicants respectfully submit that their invention is patentable under 35 U.S.C. 101.

Further, without acquiescing to the rejection, claim 8 has been amended to remove the objected to words. Claim 8 is also patentable under §101.

For all of the above reasons, applicants respectfully request withdrawal of the §101 rejection.

**35 U.S.C. §112**

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In particular, the term "relevant" in claim 1 is objected to, as well as the term "its" in claim 3. Without acquiescing to these rejections, applicants have amended the claims to remove the objected to terms, and therefore, respectfully request withdrawal of the §112 rejection.

**35 U.S.C. §102**

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Rao et al. (U.S. Patent No. 5,689,706). Applicants respectfully, but most strenuously, traverse this rejection for the reasons herein.

Applicants' invention is directed, for instance, to providing a backup for a storage area network file system. In one particular example, applicants claim a computer implemented method for backing up a file system (e.g., independent claim 1). The method includes, for instance, generating a list of inodes in inode number order, that have changed, said list including inode numbers; generating a table which has names and inode numbers for all files currently in the file system; sorting said table by inode number; merging said list and said table by inode number, whereby inodes that have changed and file names associated with the inodes that have changed are provided in a single entity; and backing up files based on said merged list and table to provide backed-up files. Thus, in this aspect of applicants' claimed invention, a particular technique is provided for backing up files of a file system. This technique provides many advantages over other techniques used to back-up file systems.

While Rao describes file systems, and a technique for providing replicated files in a distributed system, Rao does not describe, teach or suggest applicant's claimed facility for backing up a file system. In particular, Rao fails to describe, teach or suggest one or more aspects of applicants' claimed invention.

For example, applicants respectfully submit that Rao fails to describe, teach or suggest, applicants' claimed element of generating a list, in inode number order, of inodes that have changed. Although a list of inodes is provided in Rao, there is no description in Rao of generating that list in inode number order. By providing the list in inode number order, efficiencies of applicants' process are realized. Since Rao fails to mention inode order number, Rao cannot anticipate this aspect of applicants' claimed invention. Further, there is no teaching or suggestion in Rao of generating a list of inodes that have changed. In Rao, the list includes inodes for all open replicated files (see FIG. 11 of Rao). There is no teaching or suggestion in Rao of generating a list in inode number order of those inodes that have changed. Since this is missing from Rao, Rao does not anticipate applicants' claimed invention.

Support for this rejection is indicated in col. 12, lines 12-29; col. 14, lines 39-50 and FIG. 11 of Rao. However, applicants respectfully submit that those sections, as well as the other sections of Rao, fail to describe a list of changed inodes, in which the list is in inode number order. Thus, Rao fails to anticipate, teach or suggest applicants' claimed invention.

As a further example, applicants' respectfully submit that Rao does not teach applicants' claimed element of generating a table which has names and inode numbers for all files currently in the file system. In Rao, the list is an open replicated file list (see FIG. 11) that includes open files. There is no description, teaching or suggestion of creating a list for all files in the file system. Since this is not described in Rao, Rao fails to describe, teach or suggest this aspect of applicants' claimed invention.

Support for this rejection is indicated at col. 10, lines 55-64 and col. 11, lines 42-51. Col. 10, lines 55-64 describes obtaining a log file after restart. A log file includes messages, (see, e.g., col. 9, lines 15-18) and is not a list of all the files currently in the file system, as claimed by applicants. Moreover, col. 11, lines 42-51 describes the structure of namespace

801, but fails to describe, teach or suggest generating a table that has names and inode numbers for all files of the file system, which is to be used in the back-up process (e.g., sorting, merging, etc.). There is no discussion of this in Rao.

In yet a further example, applicants respectfully submit that Rao fails to describe, teach or suggest merging the generated list of inodes in inode number order with a table sorted by inode number, whereby inodes that have changed and file names associated with inodes that have changed are provided in a single entity. Applicants respectfully submit that Rao does not describe, teach or suggest such a step of merging, since in Rao the name is obtained during the open and does not need to be determined later. There is no need to perform such a merge in Rao. Since there is no merging step described in Rao, there is no merging by inode number, as claimed by applicants.

Although col. 12 describes mapping of namespaces, there is still no description in Rao of what is claimed by applicants: merging the generated list of inodes in inode number order with a table of names and inodes sorted by inode number. Thus, Rao does not anticipate applicants' claimed invention.

For at least the above reasons, applicants respectfully submit that Rao does not describe, teach or suggest applicants' claimed invention. There is no teaching in Rao of the specific steps claimed by applicants to backup a file system. Thus, applicants respectfully request an indication of allowability for independent claim 1, as well as the other independent claims.

In addition to the above, applicants respectfully submit that the dependent claims are allowable for the same reasons as the independent claims, as well as for their own additional features. For example, dependent claim 10 explicitly recites that the generating of the list of inodes is performed at backup time, rather than at application processing time to avoid the overhead of logging changes at the execution of each application and/or to avoid redundant entries for files that are modified multiple times. This is very different from Rao in which the processing described in Rao is performed at application processing time and not backup time (see, e.g., col. 9, lines 8-12). Advantageously, applicants' claimed invention avoids the overhead associated with performing processing at application processing time.

For all of the above reasons, applicants respectfully request an indication of allowability for all pending claims.

Should the Examiner wish to discuss this case with applicants' attorney, please contact applicants' attorney at the below listed number.

Respectfully submitted,

Blanche E. Schiller

Blanche E. Schiller
Attorney for Applicants
Registration No.: 35,670

Dated: May 8, 2006.

HESLIN ROTHENBERG FARLEY & MESITI P.C.
5 Columbia Circle
Albany, New York 12203-5160
Telephone: (518) 452-5600
Facsimile: (518) 452-5579